

Environmental Performance for Colleges and Universities



Fitness Training...

- What is your current state of fitness?
- What is your goal?
- How will you achieve it?
 - Exercises
 - Tools and resources
 - **Measuring performance**
- What's the competition? How do I compare?

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Measuring Fitness

- | | |
|-----------------------|-----------------------------|
| ■ Health | ■ Environmental Performance |
| ■ Weight | ■ ? |
| ■ Body Fat | ■ ? |
| ■ Weight lifted | ■ ? |
| ■ Heartrate/VO2 Max | |
| ■ Time in an activity | |
| ■ Strength | |
| ■ Endurance | |

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Can we compare?



Vs.

Campus Consortium for Environmental Excellence

- Mission
- Members
- Projects
 - Project XL
 - EMS
 -  Performance Primer

What is Environmental Performance Evaluation?

- A process to measure, analyze, assess report and communicate an organization’s environmental performance against criteria set by management.

EPE Overview

- Collect Data
- Analyze Data
- Evaluate information
- Report and communicate
- Review and Improve

EPE vs Audits

- | | |
|--------------------------|---------------------------|
| ■ EPE | ■ Audits |
| ■ ongoing | ■ periodic |
| ■ frequent | ■ sample/point in time |
| ■ data | ■ objective evidence |
| ■ line function | ■ independent |
| ■ produces information | ■ verifies system |
| ■ reports ...transparent | ■ reports ...confidential |

Performance Categories

- Operational
- Environmental
- Management

Data characteristics

- Relevance
- Reliability
- Clarity
- Comparability
- Timeliness
- Verifiability

Examples

- | | |
|---------------------------|---|
| ■ UVM | ■ Lab XL |
| ■ Energy Use/capita | ■ Completion of HCOC surveys |
| ■ Energy Use/sq. ft | ■ Percentage of lab waste reused or redistributed |
| ■ Energy Use Renewable | ■ Hazardous laboratory waste |
| ■ Air Emissions | ■ Conformance with policies/procedures |
| ■ Greenhouse Gases | |
| ■ Acres of land conserved | |
| ■ Water use/capita | |

Available tools

- EMS & CMS (and gap analysis tools)
- Palm Pilots
- Monitoring Devices
- Invoices (e.g., energy data)
- Energy and Building Management Systems
- Vendors

Benefits of EPIs

- Predict performance
- Provide insight to what the university can and cannot control as part of its EMS
- Identify root causes of performance
- Provide contextual understanding - serve as forum for dialogue

Benefits of EPE

- Assist in determining conformance with criteria set by management
- Help to achieve continual improvement
- Report and communicate
- Identify opportunities for P2
- Increase efficiency
- Identify opportunities

Choosing EPIs

- | | |
|-----------------------------|----------------------------------|
| ■ What's Easy | ■ What's Hard |
| ■ Many EPIs out there | ■ Finding the right one |
| ■ Collecting data | ■ Finding good data |
| ■ 3 types | ■ 3 x infinity |
| ■ Absolute data | ■ Normalized |
| ■ Finding people with ideas | ■ Managing people in the process |

Measuring Environmental Fitness

- Operational/Impacts

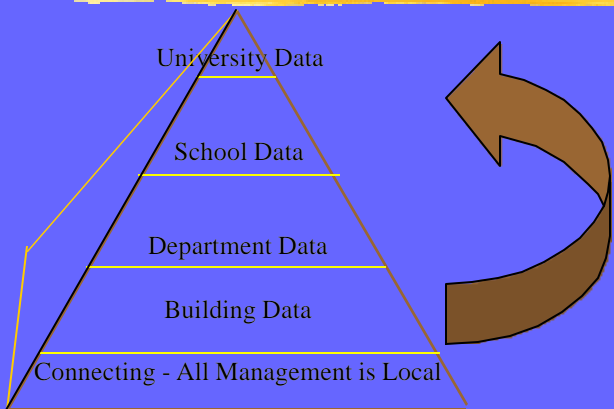
 - Dining hall waste/capita
 - Recycled solid waste
 - Pollutant disposal in wastewater (by wt.)
 - Pesticide usage
 - Fuel consumption of fleet
- Management

 - # of audit findings per period
 - % of resolved audit findings
 - % completion of EH&S objectives
 - Web hits on EHS page
 - Training scores

A Tip from Tip (O'Neill)

All Management is Local

Environmental Performance



Categorizing Information for Comparative Purposes

	Per School	Per Dept.	Per Bldg.
Tons of Waste			
Percent Recycled			
Percent Incinerated			
Percent Compostable			

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Available Resources

- Campus Ecology
- NDEMS database (50 pilot facilities implementing an EMS)
- Global Reporting Initiative (GRI)
- Corporate Performance Reports
- ISO 14031
- C2E2

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Who's Doing What?

- Campus Ecology
- Penn State University
- Yale
- University of Florida
- UVM
- C2E2
- CSHEMA
- ULSF

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Summary - Measuring Performance

- Think fitness
- It's harder than it looks
- All management is local
- If you're not keeping score, you're only practicing
